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# ENVIRONMENTAL Fact Sheet

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## Mercury-Containing (Universal Waste) Devices: Management Requirements for Handlers and Transporters

### INTRODUCTION

A number of devices contain mercury and may pose a hazard to human health or the environment when improperly managed. Examples of mercury-containing devices include certain types of thermostats, thermometers, switches, and relays. Due to this concern, the State of New Hampshire adopted Env-Wm 1101 – 1114, the *Universal Waste Rule*. This rule regulates the management of universal waste lamps so as to promote recycling, pollution prevention and safe handling methods. The *Universal Waste Rule* is explained in this fact sheet.

**Why is mercury an environmental concern?** Mercury is a heavy metal that can accumulate in living tissue and cause adverse health effects. When a universal waste device is disposed of in a solid waste landfill or incinerator, the mercury can contaminate air, soil, surface water and groundwater. In New Hampshire, mercury has been detected in freshwater fish and a statewide fish consumption advisory has been issued by the Department of Health and Human Services. For more information on mercury in New Hampshire's environment, see DES's *New Hampshire Mercury Reduction Strategy*, published October 1998.



### REQUIREMENTS FOR MANAGING MERCURY-CONTAINING DEVICES

Waste mercury-containing devices from businesses, industry and institutions may **not** be disposed of as a solid waste, unless they are below the regulatory limits for mercury when subjected to a toxicity test required by the U.S. Environmental Protection Agency and DES. Many mercury-containing devices, including thermostats, exceed the hazardous waste regulatory limit for mercury toxicity of 0.2 milligrams per liter. Generators of waste are responsible for determining whether their wastes are hazardous and, if so, managing these wastes in accordance with the requirements of the *N.H. Hazardous Waste Rules*. These requirements may include use of a hazardous waste manifest, New Hampshire registered hazardous waste transporter, and delivery to an authorized hazardous waste facility.

Alternatively, mercury-containing devices may be handled under Env-Wm 1100, the *Universal Waste Rule* that went into effect October 13, 2001 and further described in this fact sheet. DES believes that recycling is the preferred option for managing universal waste lamps and that the *Universal Waste Rule* will promote the recycling and proper management of universal waste lamps.

## **Universal Waste**

"Universal wastes" are wastes that meet the definition of hazardous waste in the *N.H. Hazardous Waste Rules*, but which during accumulation and transport pose a relatively low risk compared to other hazardous wastes. Wastes that DES has determined meet universal waste criteria include used antifreeze, mercury-containing lamps and devices, certain types of batteries, cathode ray tubes, and recalled or suspended hazardous waste pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

## **Generator Status**

Under this policy, hazardous waste generators are not required to include waste mercury-containing devices and other universal wastes in their calculation of generator status in accordance with the *N.H. Hazardous Waste Rules*, Env-Wm 503. Universal wastes, when recycled, are also not subject to the generator fee required by Env-Wm 512.02.

## **Universal Waste Consolidation**

A facility may collect waste mercury-containing devices from other sites or generators without a permit, provided the facility meets the handler requirements described in this fact sheet and complies with other applicable federal, state, and local regulatory requirements.

## **REQUIREMENTS FOR HANDLERS**

A "**handler**" of waste mercury-containing devices means: (1) a generator of hazardous or universal waste mercury-containing devices; or (2) an owner or operator of a facility that receives hazardous or universal waste mercury-containing devices from other handlers, accumulates the devices, and sends the devices to another handler or to a destination facility. Handlers of universal waste mercury-containing devices must either meet the following standards or comply with the generator and/or facility requirements of the *N.H. Hazardous Waste Rules*.

### **1. Release Prevention**

Manage waste mercury-containing devices in a way that prevents releases of mercury to the environment.

### **2. Quantity Limit**

Universal waste handlers are either small, large, or very large quantity handlers.

**a. Small Quantity Handlers** -- accumulate less than 5,000 kilograms (approximately 11,000 pounds) of combined universal wastes on-site at any time. Approximately 17,600 forty-eight inch fluorescent tubes would weigh 11,000 pounds.

**b. Large Quantity Handlers** -- accumulate 5,000 kilograms or more, but less than 20,000 kilograms, of combined universal wastes at any one time and must also comply with Env-Wm 1104 described in this fact sheet in the section titled, "Additional Requirements for Large Quantity Handlers."

**c. Very Large Quantity Handlers** -- accumulate 20,000 kilograms or more of combined universal wastes at any one time and must also comply with Env-Wm 1105 described in this fact sheet in the section titled, "Additional Requirements for Very Large Quantity Handlers."

### **3. Labeling**

For all other waste mercury-containing devices, clearly label or mark each device or container of

devices with any one of the following phrases: "Universal Waste--Universal waste device(s)," or "Waste Universal waste device(s)," or "Used Universal waste device(s)."

#### **4. Containers**

Store both intact and broken mercury-containing devices in containers that are compatible with the universal waste, in good condition, and closed at all times except when devices are being added to, or removed from, the container. If containers are stored outside, they must be covered to prevent precipitation from coming in contact with the containers.

#### **5. Accumulation Time Limits**

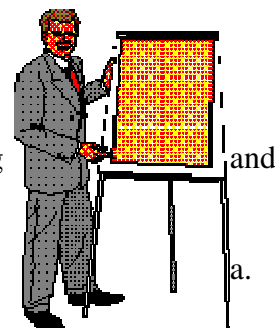
a. Accumulate waste mercury-containing devices for no longer than one year from the date the mercury-containing devices are generated or received from another handler.

b. Demonstrate the length of time that the waste mercury-containing devices have been accumulated from the date the devices became waste or were received. The handler may make this demonstration by:

- (1) marking or labeling containers with the starting accumulation date; or
- (2) maintaining an inventory system on-site that identifies the earliest date devices were added to a container or received from off-site.

#### **6. Training**

Ensure that all employees who handle or have responsibility for managing waste mercury-containing devices are thoroughly familiar with the handling emergency procedures appropriate to mercury-containing devices.



#### **7. Off-Site Shipments**

Handlers are prohibited from sending or taking waste mercury-containing devices to a place other than another handler, a universal waste device recycling facility, or an authorized hazardous waste facility.

b. Prior to sending a shipment of waste mercury-containing devices to another handler or destination facility, the originating handler must ensure that the receiving handler agrees to receive the shipment.

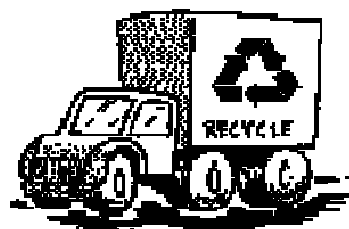
c. Shipments must meet all applicable United States Department of Transportation (US DOT) and New Hampshire Department of Safety (NH DOS) regulations for mercury-containing devices.

d. If a waste universal waste device shipment is rejected by an intermediate handler or destination facility, arrangements must be made by the originating handler to:

- (1) receive the waste back when notified that the shipment has been rejected, or
- (2) send the device shipment to an alternate facility.

#### **8. Exports**

A handler of waste mercury-containing devices who sends the devices to a foreign destination must comply with the requirements for international shipments as set forth in Env-Wm 510.06 of the *N.H. Hazardous Waste Rules*.



## **ADDITIONAL REQUIREMENTS FOR LARGE QUANTITY HANDLERS**

A handler who accumulates 5,000 kilograms or more of combined universal wastes must comply with Env-Wm 1104. These requirements include:

1. Prior to collecting 5,000 kilograms or more of combined universal wastes, notify the N.H. DES of this activity and obtain an EPA Identification Number if one has not already been obtained.
2. Keep records for three years on each shipment of waste received or sent. These records must include:
  - a. The date of each shipment.
  - b. The quantities of each shipment.
  - c. The name and address of the handler or facility from which waste lamps were received or shipped to.

## **ADDITIONAL REQUIREMENTS FOR VERY LARGE QUANTITY HANDLERS**

A handler who accumulates 20,000 kilograms or more of combined universal wastes must comply with Env-Wm 1105. These requirements include:

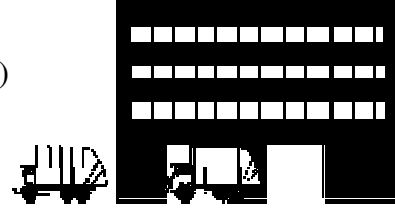
1. Submit a notification form for each on-site location where universal waste is accumulated.
2. Ensure universal waste is not stored within a 100-year floodplain.
3. Complete and document weekly inspections of all universal waste storage areas.
4. Establish and post contingency plans and emergency procedures and provide emergency response equipment.
5. Post emergency response information at each universal waste storage area and provide access security measures to universal waste storage areas.
6. Provide closure plans and sufficient financial assurance for closure.

## **REQUIREMENTS FOR TRANSPORTERS**

1. Transporters are not required to obtain a N.H. hazardous waste transporter registration or use a hazardous waste manifest for waste mercury-containing devices, but must meet all applicable US DOT and NH DOS regulations.
2. Transporters are prohibited from sending or taking waste mercury-containing devices to a place other than:
  - a. another handler.
  - b. an authorized universal waste device recycling facility.
  - c. an authorized hazardous waste facility.

### **3. Staging During Transportation**

- a. Transporters who remove waste mercury-containing devices from their vehicles and stage them temporarily are not required to obtain a hazardous waste transfer facility permit, but are subject to US DOT and NH DOS regulations.
- b. Transporters who stage waste mercury-containing devices for more than 10 days must also meet universal waste handler requirements.
- c. Transporters must not stage more than a combined total of 5,000 kilograms (approximately 11,000 pounds) of waste mercury-containing devices and other universal wastes on-site at any time.



#### **4. Exports**

Transporters taking waste mercury-containing devices to a foreign destination must comply with the requirements for international shipments as set forth in Env-Wm 604.04 of the *N.H. Hazardous Waste Rules*.

### **REQUIREMENTS FOR HANDLERS AND TRANSPORTERS**

#### **Handling Procedures for Broken, Leaking, or Damaged Devices**

1. Immediately contain and clean up all releases from broken, leaking, or damaged mercury-containing devices.
2. Place any broken or damaged devices and any residues resulting from breakage or damage in a secure container.
3. The container must be closed and sealed, structurally sound and compatible with the broken devices. A plastic lined box, fiber drum or a plastic bucket with a lid that seals is recommended since some types of metal containers may be incompatible with mercury. Ensure the container is clean, because if it is contaminated with other chemicals, those substances may react with the mercury.
4. Any releases that pose a threat to human health or the environment must be reported immediately to DES at 603-271-3899, Monday through Friday, 8 am to 4 pm or to NH DOS Hazmat Unit at 1-800-346-4009, 24 hours/day and to the municipality in which the release occurred.
5. Mercury residues from broken devices must be handled in accordance with the *N.H. Hazardous Waste Rules*. The residues may be sent to a recycling facility or a hazardous waste treatment, storage, or disposal facility authorized to accept the waste. A N.H. registered hazardous waste transporter and hazardous waste manifest must be used. Transporters who are transporting mercury residues must meet the requirements of the *N.H. Hazardous Waste Rules*, Env-Wm 600. All applicable US DOT packaging and shipping requirements for mercury residues must be met.



#### **FOR MORE INFORMATION**

Questions on Universal Waste Rule should be directed to DES's Pollution Prevention & Education Section at 603-271-2956 or the Hazardous Waste Compliance Section at 603-271-2942.

A list of universal waste device recycling facilities, DES's *New Hampshire Mercury Reduction Strategy*, copies of other fact sheets, and the *N.H. Hazardous Waste Rules* are available from DES's Public Information and Permitting Office at 603-271-2975, (TDD Access: Relay N.H. 1-

800-735-2964). Copies of DES fact sheets and rules are also available on DES's web site at [www.des.state.nh.us](http://www.des.state.nh.us).

Information on US DOT and NH DOS regulations can be obtained from the N.H. Department of Safety, Hazmat Unit at 603-271-3349.

*Disclaimer: Information contained in this fact sheet is current as of March 22, 2002. Policy and regulatory changes occurring after this date may affect part or all of this information. For questions on the status of this information, contact DES at 603-271-2942.*